Evaluating service access and utilization among young intravenous drug users in post-Katrina New Orleans

By:

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ABSTRACT

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Background: Young intravenous drug users (IDUs) are specifically susceptible to adverse health outcomes. Utilization and access of needed services is not common among this population due to a lack of awareness, or a lack of services. Young IDUs in New Orleans are a vulnerable population that has not been extensively studied, particularly in the aftermath of Hurricane Katrina. Overall, the purpose of this project was to assess the availability and utilization of services among young IDUs in New Orleans after Katrina.

Methods: A secondary data analysis was undertaken involving semi-structured interviews of young injection drug users (IDU, N=34), and leaders of service organizations as part of the Community Assessment Process (CAP, N=10), in post-Katrina New Orleans. These interviews focused on drug use, service accessibility and utilization. NVivo 8 was used to generate themes and create codes regarding service utilization, accessibility and perception of available services.

Results: CAP and IDU interviewees mentioned difficulties providing and acquiring services. CAP interviewees described issues organizations faced, such as a reduction in services, personnel, funding streams, location hardships and difficulties reaching population. Overall, few IDUs sought out services, but the majority of those who did seek were able to find services.

However, perceptions varied and many were unsatisfied with the quality of the services they received.

Conclusion: Findings from the CAP and IDU data shows the significant impact Hurricane Katrina had on the accessibility and utilization of services in New Orleans among IDUs. This data provides significant information needed to provide relevant services and to design effective intervention programs for this population.

INTRODUCTION/STATEMENT OF THE PROBLEM:

Vulnerable populations have the least access to needed services and are at a higher risk for adverse health outcomes (Saunders, 2007). Young intravenous drug users (IDUs) in New Orleans are a vulnerable population that has not been extensively studied, particularly in the aftermath of Hurricane Katrina. Exploring their life style, high risk behaviors, access and utilization of services post-Katrina and specifically, how their behaviors may have been influenced by lack of services, can contribute to the literature in this population.

Studies show, that in comparison to older or established IDUs, young IDUs engage in higher risk behaviors, which increases their exposure and/or vulnerability to infections, diseases and other adverse health outcomes (Miller, Johnson, Spittal, Li, LaLibert, Montaner & Schechter, 2002). Young IDUs are more likely to have casual sex partners, use condoms inconsistently, share needles and other drug paraphernalia or equipment, and engage in sex trade work (Miller et al., 2002). In New Orleans after the devastation of Katrina, the medical infrastructure was crippled and all services, including medical, mental health, prevention, housing, shelter, drug treatment and youth services were scarce. A study by Rowe and Liddle evaluated the effect Hurricane Katrina had on youth including post-traumatic stress, and occurrence and increase in substance abuse (2008). Their findings indicated that youth are specifically at risk for adverse outcomes under stressful and traumatic conditions, such as following a major disaster (Rowe & Liddle, 2008).

Following a disaster such as Katrina, when services were needed more, especially among high risk populations, these services were scarce or nonexistent. Evaluating a high risk youth

population in New Orleans following Katrina can provide information on particular service needs among this population in the aftermath of Katrina. Therefore, interventions and programs relevant to young IDUs in New Orleans and across the country can be developed using data and information from this project.

BACKGROUND AND SIGNIFICANCE:

New Orleans pre-Katrina:

Before Katrina, 2005 data indicates that 23% of New Orleans residents lived in poverty (Rudowitz, Rowland & Shartzer, 2006). Additionally, New Orleans had large disparities in health status for minorities, specifically African-Americans, who represent two-thirds of the population. Minorities were more likely to suffer from asthma, diabetes, and heart disease in comparison to their White counterparts (Rudowitz et al., 2006). More than one in five residents lacked health insurance due to poverty, low rates of private coverage and employer-sponsored coverage, and limited public assistance. With one of the highest uninsured rates in the country, almost 900,000 residents lacked health insurance in New Orleans (Rudowitz et al., 2006).

Services available before Katrina:

In Orleans Parish, located in the core of New Orleans, 48% of residents were low income, and inpatient and outpatient services were provided by nine acute care hospitals (Rudowitz et al., 2006). The adjacent Jefferson Parish, with 32% low income residents, had seven acute care hospitals (Rudowitz et al., 2006). In Louisiana, the uninsured and poor population was mostly served by state run safety-net hospitals while the insured had access to a range of physicians and

hospitals. Charity Hospital provided care for the majority of the underserved, minority, poor and uninsured population with one of the busiest emergency departments in the country. Even before Katrina, the hospital experienced shrinking public resources, lack of funds for infrastructure improvements and a burden of uncompensated care (Rudowitz et al., 2006). Due to lack of funding, substance abuse issues, mental and behavioral health services were inadequate with Charity Hospital handling the bulk of these issues (Rudowitz et al., 2006).

Drug use in New Orleans:

The drug market in New Orleans was described as "flourishing" in Dunlap, Johnson and Morse's (2007) study evaluating drug use in New Orleans prior to Katrina, which utilized the Arrestee Drug Abuse Monitoring (ADAM) program from 2000-2003. The three major drugs, crack, cocaine and marijuana, were readily available in New Orleans prior to Katrina. According to ADAM data, crack was the major drug of use in New Orleans among arrestees (40%) and 77% or arrestees reported outdoor purchases of crack (Dunlap et al., 2007). Fifteen percent of arrestees reported heroine use, with 75% of purchases occurring outdoors (Dunlap et al., 2007). Finally, with regard to marijuana, 46% of New Orleans arrestees reported use, with 72% of purchases occurring outdoors (Dunlap et al., 2007). In Dunlap et al.'s study, the investigators also interviewed current New Orleans' drug users and asked about the drug markets prior to Katrina (2007). All reported the availability of their drug of choice. Overall, the drug market in New Orleans' was not only abundant, it was quite public (Dunlap et al., 2007).

Hurricane Katrina-When the Levees Broke:

On August 29, 2005, one of the most destructive hurricanes to ever hit the United States caused massive damage and destruction to New Orleans. In the 19th and 20th century, many neighborhoods in New Orleans were built in marshes below sea level, and levees were built to prevent flooding (Dunlap et al., 2007). After the eye of the storm hit New Orleans, many thought they made it through another one, until the levees broke causing massive flooding (Nigg & Torres, 2006). Flooding crippled or destroyed most of the city and its infrastructure (Rudowitz et al., 2006). Eighty percent of the city was flooded. Hurricane Katrina is by far the most costly and deadliest hurricane to affect the United States (Kissenger, Schmidt, Sanders, & Liddon, 2007). Estimates say the economic impact of Katrina can in fact surpass $100 billion (Rodriguez & Aguirre, 2007). An estimated 90% of the residents in southeast Louisiana left their communities and homes prior to and following Katrina, making it the greatest migration within the United States since the Dust Bowl in the 1930s (Nigg, Barnshaw & Torres, 2006). About 780,000 people were displaced, 18,700 businesses damaged, 200,000 homes lost, 850 schools destroyed, and 220,000 jobs lost (Rudowitz et al., 2006). Residents were left without basic health needs and the health care infrastructure was all but destroyed due to the storm (Kissenger et al., 2007).

General services after Katrina:

Health care and general medical services:

A year after Katrina, many hospitals remained closed, including Charity Hospital which provided care for most of the poor and uninsured population of New Orleans (Berggren et al.,

2006). In its absence, Louisiana State University opened a temporary medical clinic and emergency department, which still did not have the capacity to meet the city's needs (Rudowitz et al., 2006). Even a year after Katrina, the health care infrastructure was still experiencing the devastating affect of the storm (Rudowitz et al., 2006). Berggren et al. describes the health care infrastructure as "primitive" seven months after the storm (pg. 1552, 2006). The Kaiser Family Foundation conducted a survey a year after Katrina evaluating residents' concerns and hardships, mostly regarding health care needs (2007). Thirty-six percent of residents reported a decline in their access to services, 23% said stress due to the storm affected their behaviors, 18% reported serious mental health conditions, 43% reported fair or poor health and over half of the residents reported facing serious problems accessing medical services (Kaiser, 2007).

Mental health services:

According to a study conducted by Wang et al. (2008), the mental health needs of Katrina survivors increased. Due to disruption in care, those with existing issues had limited access to care and medications resulting in the worsening of conditions. Additionally, many acquired new mental health disorders after the storm due to post-traumatic stress which may have also exacerbated previous existing medical conditions (Wang et al., 2008). Furthermore, with the closing of Charity Hospital, mental and behavioral issues were not addressed particularly among New Orleans' poor and uninsured population (Rudowitz et al., 2006). Overall, the residents left in New Orleans after Hurricane Katrina who needed mental health services had limited access to needed services (Wang et al., 2007).

Sexual health services:

During and following Katrina, sexually transmitted infections and family planning services were temporarily and sporadically available mostly by nonprofit organizations, humanitarian agencies and Red Cross shelters (Kissenger et al., 2007). One year after Katrina, the main sexually transmitted infection (STI) and family planning clinic remained closed (Kissenger et al., 2007). According to Kissenger et al.'s (2007) study evaluating the sexual behaviors and access to servicers among young women post-Katrina, 31% of the women had trouble getting birth control, 40% had not used birth control and as a result of inaccessibility to services, 4% experienced an unintended pregnancy. Furthermore, 17% of the women could not access needed care and 56.4% were unable to go for any family planning services (Kissenger et al., 2007). Evidently, contraceptive, STI and general sexual health services were scarce after Katrina.

Shelter and temporary housing:

The first wave of evacuees out of New Orleans was an estimated 1.2 million people. Over 100,000 more evacuated after Katrina due to harsh and unlivable conditions (Nigg et al., 2006). Thousands were unable to evacuate due to health reasons, limited mobility, or lack of funds or personal transportation (Nigg et al., 2006). Those that were left behind needed shelter in order to survive the storm. The Louisiana Superdome was deemed the "refuge of last resort" and sheltered thousands. As the numbers increased, the New Orleans Convention Center also became an emergency shelter as well as multiple smaller shelters, most of which were ran by the Red Cross (Nigg et al., 2006). Although medical, social and even drug treatment services were

somewhat available at evacuation sites outside of New Orleans (Dunlap et al., 2007), services within the city were almost non-existent at first and scarce soon after. Furthermore, shelters in New Orleans were scarce and over crowded, therefore the majority of residents were evacuated out of the city (Nigg et al., 2006).

Drug use in New Orleans after Katrina:

Using ethnographic interviews, Dunlap et al.'s study interviewed about 100 evacuees who were drug users after Katrina, in New Orleans and Houston (2007). Some questions asked specifically about drug markets and the availability of drugs right before the storm, during and immediately after the storm, and weeks to months after the storm (Dunlap et al., 2007). Some participants talked about "preparing" or "stocking up" for the storm with their drug of choice to help them get through the storm (Dunlap et al., 2007). The week after Katrina was hectic for all residents including the participants in this study. Many mentioned that they were not thinking about buying drugs and they were more concerned about their own and their family's safety, survival and trying to evacuate New Orleans (Dunlap et al., 2007). Those who purchased drugs prior to Katrina reported using after the storm, but did not try to locate and buy drugs. The few who reported seeking out drugs mentioned drug activity outside of hotels, or obtaining drugs and supplies by stealing from drug seller's homes once they evacuated New Orleans (Dunlap et al., 2007).

Theoretical framework: The "risk environment" framework for reducing drug-related harm

Historically, in the public health and health promotion field, focus was placed on the individual when trying to change risk behaviors, as oppose to a focus on the individual's

environment. The environment, social factors, neighborhood, socioeconomic status and other factors that can produce a "risk environment" can influence behaviors, decisions and in result health status. Rhodes (2002) discusses the shift in public health research and practice from the individual and behavioral to the ecological, and how applying the risk environment framework to evaluate drug use and harm reduction can prove to be helpful. Risk reduction encourages change on all levels, including the individual, community, environment and policy levels. This approach allows us to focus on social situations and as well as places where harm is produced and can be reduced (Rhodes, 2002). The risk environment approach not only examines the circumstances that produce harm, but it also helps in predicting what causes harm in order to prevent harm. The risk environment framework aims to transform harm environments to enabling environments and is useful in the design of research and prevention efforts for drug users (Rhodes, 2002).

This project examined factors in the drug related risk environment and risky behaviors by interviewing current drug users. It evaluated participants' environments and how their surroundings could have contributed to risk behaviors. Were they always around others who used drugs? Do environmental factors play a bigger role than psychological factors? What were their environments like particularly after Katrina? This study will in turn aid in the development of intervention programs to reduce risks specifically among populations vulnerable to drug use.

SPECIFIC AIMS:

This project helped to fill missing gaps in the literature regarding young IDUs, specifically, access and utilization of services in post-Katrina New Orleans. Studies examining this specific issue among young IDUs in post-Katrina New Orleans have not been done before.

This project looked into details of the lifestyle of young IDUs and the effect of Katrina on access/utilization of services. It described linkages among social and environmental factors (housing, patterns of drug use, risk behaviors), adverse health outcomes and access and utilization of services. The aims of this study include:

1.) To evaluate the accessibility of various services (medical treatment, mental health, shelter/housing, drop in centers, drug treatment, contraceptives) among young IDUs in New Orleans after Katrina.

2.) To evaluate the utilization of these services among young IDUs in New Orleans after Katrina.

RESEARCH DESIGN AND METHODS:

A. Overview of the study design:

A secondary data analysis was undertaken involving semi-structured interviews of young injection drug users (N=34) and leaders of service organizations (N=10) in post-Katrina New Orleans. All recruitment occurred in post-Katrina New Orleans. All participants participated in face-to-face semi-structured interviews. Results from these qualitative accounts were recorded and transcribed. These interviews focused on drug use, service accessibility (drop in centers, homeless shelters, contraception, drug treatment, mental health and other health services), service utilization and high risk behaviors.

B1. Subjects: CAP (Community Assessment Process Interview-Systems/Interactor, N=10)

Staff leadership or heads of five community-based organizations (CBOs) with "local knowledge" that were able to talk about service provision at their respective organization post-Katrina were interviewed. This Community Assessment Process (CAP) included community health workers, program managers, program coordinators as well as outreach staff. The number of CAP interviews (N=10) was selected to get a diverse group of heads of CBOs that could offer their perspective on health service concerns post-Katrina. These community level persons held leadership positions in New Orleans' CBOs pre and post-Katrina and therefore had knowledge regarding organizational operations and services. There are a small number or individuals in New Orleans in these positions. These individuals come from a variety of local institutions that worked with high-risk youth at a "systems level." A central goal of these interviews was to collect objective information regarding services available to high-risk youth in New Orleans post-Katrina. A staff ethnographer had previous working relationships with individuals during phase one of the study prior to Hurricane Katrina. Following the storm, those knowledgeable about health services were contacted by phone (consented verbally) and set up interviews to discuss health services in New Orleans post-Katrina. Interviews were conducted from February to March 2006.

B2. Subjects: IDUs

The enrollment criteria for IDUs included:

1.) Aged between 16 and 25 years old. This range was selected to capture a range of high-risk youth (all participants enrolled were over 18 years of age).

2.) Inject ketamine within the last two years. This criterion kept the sample consistent with the parent R01.

3.) Used an illegal drug in New Orleans since Hurricane Katrina. This criterion was selected to ensure participants accessed the New Orleans drug market.

4.) Did not participate in a baseline interview in New Orleans, New York or Los Angeles. This criterion will ensure that new and unique subjects are enrolled.

Thirty-four young IDUs were enrolled and interviewed with specific questions regarding the aftermath of Katrina, between July 2006 and April 2007. These interviews focused on risk behaviors, drug use, drug supply and overall experience in New Orleans post-Katrina. Thirty-four participants is a sufficient number for a descriptive qualitative analysis of the risk behaviors, drug use and service utilization among young IDUs post-Katina.

The enrollment criteria ensured participation of high-risk youth who had a history of injecting ketamine and were active drug users in New Orleans post-Hurricane Katrina to analyze risk practices, life-styles and service utilization. This allowed for detailed narrative descriptions of drug use, risk practices, and service needs following Katrina in addition to capturing data on ketamine injection practices.

Information about the locations of young ketamine injectors was collected during the Community Assessment Process (CAP). The ethnographer designed a sampling strategy focusing on specific neighborhoods and venues to recruit the desired population as well as chain referrals using recruited participants. Participants were recruited within the French Quarter

(Jackson Square and Faubourg Marigny) in areas frequently visited by young people, residents and tourists such as tattoo shops, bars, parks and retail stores. These areas also attracted homeless youth, whether local, "traveler", or "nomadic." In order to hide enrollment criteria listed above, screening questions focused on recent drug use, health behaviors and history of homelessness. All participants enrolled signed informed consent documents approved by Tulane University's Institutional Review Board before the interview. Participants received a $20 drug store gift certificate and referral information for service organizations targeting high-risk youth, such as health clinics, youth services, and homeless shelters.

C1. CAP Data Collection Methods and Procedures:

Semi-structured, face-to-face interviews with key informants were recorded and transcribed. These interviews focused on service accessibility (drop in centers, drug treatment, contraception, shelters, and health services) after Katrina. These individuals had the local knowledge and expertise to discuss the services provided and available to the population in their respective organizations. Survey instrument development was driven by concerns following Katrina. The instrument was not adapted from other psychometric studies/surveys, but rather crafted for this particular study. Data included a series of transcripts based upon semi-structured CAP interviews.

C2. IDU Data Collection Methods and Procedures:

Semi-structured face-to-face interviews with intravenous drug users were recorded and transcribed. These interviews focused on drug use in New Orleans, specific drugs used and how they were used, service utilization (drug treatment, mental health and other health services,

contraception, drop-in centers and shelters), and high risk behaviors. Interviews contained modules focusing on the topics previously mentioned. With regard to survey instruments, instrument development was driven by concerns following Katrina. Instruments were not adapted from other psychometric studies/surveys, but rather were crafted for this particular study. Data includes a series of transcripts based upon the semi-structured interviews of young ketamine injectors in New Orleans.

D1. CAP Analysis Plan:

Analysis of the 10 interviews of organization staff provides information regarding availability of services after Katrina. This gives a descriptive account of services available and provides their perspective on utilization of these services. NVivo 8, a qualitative analysis software, was used to create codes and generate themes, guided by questions from the interviewer during the recorded semi-structured interviews. During this coding process, themes emerged regarding service availability among organizations in New Orleans and descriptions of the types of services available, hardships with regard to providing those services, the population served by those organizations and access to services. Participants' names and organizations were substituted with pseudonyms to protect privacy.

D2. IDUs Analysis Plan:

Analysis of the 34 interviews of young IDUs provides information regarding accessibility of services after Katrina. This gives a descriptive account of services available and utilized by this population. Using PASW Statistics 18 (Previously SPSS), descriptive statistics were generated using frequencies and percentages to yield demographic information about the

participants. NVivo was used to analyze the semi-structured recorded interviews to generate themes and create codes guided by questions from the interviewer. Themes emerged regarding service utilization, accessibility and perception of available services. All participants were given pseudonyms to use in this analysis to protect privacy.

Human Subjects Considerations:

All subjects were previously consented and recruited in New Orleans as part of the "High-Risk Youth in New Orleans in the Aftermath of Hurricane Katrina" study by Dr. Stephen Lankenau, the principle investigator. This project is a secondary data analysis with no new subjects. All participants enrolled signed informed consent documents approved by Tulane University's Institutional Review Board before the interview. Participants received referral information for service organizations targeting high-risk youth, such as health clinics, drop-in centers, and homeless shelters. Participants also received $20 gift certificates for participation. Additionally, in January 2010, Drexel University's Institutional Review Board approved for this data to be used and analyzed for this project under Protocol number 18787 and Project number 1043585.

RESULTS:

CAP DATA:

CAP interviewees (N=10), from five organizations, represented staff and leaders from various community and service organizations in New Orleans. Organizations included a Government Health Agency (N=1), a Faith-Based Service Organization (N=4), an Outreach

Program (N=1), an STI Service Organization (N=3) and a Youth Services Organization (N=1). Positions held by interviewees include Biostatistician, Community Health Worker, Program Coordinator, Health Services Manger, Nurse, Admissions Counselor, Wellness Management Coordinator and Specialist, and Crisis Center Program Manager (See Table 1). These participants worked within communities in New Orleans before and after Katrina providing services to many populations, including intravenous drug users.

Accessibility of services:

In order to evaluate the accessibility of various services (medical treatment, mental health, shelter/housing, drop-in centers, drug treatment, and contraceptives) among IDU's in New Orleans after Katrina, CAP interviewees were asked about the services their respective organizations were able to provide. Specifically, they were asked when services were available and the various hardships they experienced after the storm with regard to location, funding, personnel, services, reaching the population and organization collaboration.

Services available right after storm:

All organizations' services were disrupted in someway after Katrina, according to interviewees. Most were closed during and after the storm due to damages to facilities and loss of personnel. Interviewees were asked how soon after the storm were they able to re-open and provide services. Only one of the five organizations stated they were able to provide some degree of services a few days after the storm, but their facility did not open until October 2005, so services were very limited at that time. Jo, a Biostatistician with the Government Health Agency, said, "It sort of depends on the service you're talking about and in terms of the

prioritization of those services. The AIDS drug assistance provider/ coordinator, the person who basically gives people their drugs was on her cell phone Monday and Tuesday talking with people who needed drugs after they evacuated…We actually obtained some space here in town that was October 3rd, 2005 and so most of the staff returned at that point and have been back at work and one of our various locations ever since." Relief responses were able to open sooner as Lee, a Community Health Worker stated, "September 9th was when we opened…I mean we're relief response." However, three of the five organizations reported becoming fully functional after November 2005.

Changes and hardships-location/spacing:

All organizations obviously experienced some level of disruption that stifled services because of Hurricane Katrina. One of these hardships included changes in spacing or location. All interviewees discussed some level of hardship with regard to location/spacing such as closing, evacuating, damages to the building and moving to another location. Don, a Program Manager with the Youth Services Organization, talked about the level of disruption to his organization due to losing their building in the storm, "We haven't been able to run because of lack of space and lack of facilities…We can't have volunteers we have no space for them. It's impacted our mental health program because we have no separate room for them to do therapy…And we'll see clients who have been in town for 3 or 4 months who say I didn't know you all were open I went by and saw that it was boarded up…" Daniel, a Wellness Management Coordinator and Specialist with the STI Service Organization, discussed the limited services the organization could provide while operating from a temporary site, "Not being able to have access

because there was no electricity…" Similarly, Sam with the Faith-Based Service Organization talked about hardships with regards to spacing, "Since during the storm the roof blew off, then the water came in, it flooded about a foot, they broke in and used it as shelter and they vandalized, looted. The building has been gutted, so we haven't been able to work in there. We had to improvise in the beginning. In the very beginning we were working out of a mobile unit with healthcare for the homeless…Obviously the office space is much more limited. I wish we had more exam rooms because we could see more people…There's a lot of people who want to volunteer we just don't have the space."

Changes and hardships-resources/funding:

Whether or not funds were cut or expanded depended on where the organization originally received funding. If the organization primarily ran on federal or state grants, it seemed as if those were expanded a bit as hurricane relief money was allocated. On the other hand, if the organization typically received funding from local establishments or personal donations, those funds were greatly diminished after Hurricane Katrina. Organizations who received money from private donations as well as federal or state funders also noticed this trend and mentioned an increase in federal funding and a decrease in individual and local donations. Three organizations mentioned their funds either expanded or stayed the same, while two specifically discussed some sort of reduction in funds after Hurricane Katrina. For example, Sam from the Faith-Based Service Organization mentioned, "We had some money through the Federal Government, for healthcare for the homeless that's through the city…But we were able to get hurricane relief money through the Free Clinics Association of America to help fill that gap and then some.

We've actually have gotten more money from other agencies…We didn't lose any of our funders' and actually we've just gained one big one."

On the other hand, May, a Crisis Center Program Manager, discussed the reduction of private donations, but the increase in large grants, "What we've had is a massive drop off in our traditionally largest source of funding which is the little private donations. Our typical is the 72 year old little Catholic grandmother sends in her $20 bucks every month like clock work. That's really dropped off, small to medium donations, direct mail stuff. What has increased are large grants and private donations from either foundations or very wealthy people."

Changes and hardships-personnel:

Interviewees were also asked how Hurricane Katrina impacted program resources such as personnel and volunteers. Some organizations specifically noticed an increase in volunteers following Katrina while others discussed losing staff due to the storm and a decrease in available volunteers. Ray, a Program Coordinator, noticed an increase in individuals wanting to volunteer with the organization, "Volunteers were non-existent for a little while and now we're getting probably daily requests from people saying I want to help…" On the other hand, Jo, a Biostatistician, discussed the issue of losing volunteers due to the closing of universities, "Well we don't have a lot of volunteers around here but what we would have are graduate student assistance and people doing capstones and that kind of thing so that's problematic given the state of the universities…I mean there was some staffing loss just due to the storm or other factors and it's kind of difficult to higher people these days anyway." Ronni, a Health Services Manager/Nurse noticed an overall reduction of staff due to people evacuating New Orleans and

not returning, "The biggest challenge I think is the same one that most agencies are facing, having the available personnel to meet the needs. You know many people did not come back, those that came back were looking at other jobs possible paying more money…"

Furthermore, personnel hardships are intrinsically linked to hardships with spacing and locations. A couple organizations noted that they would like to accept more volunteers but do not have the space for them. Don, a Program Manager, experienced this issue and also noticed the impact spacing had on the mental health of the organization's staff, "Our big thing is space which in turns impacts everything. We can't have volunteers we have no space for them… So just losing our building has impacted us. It has impacted the mental health of our staff as well."

Changes and hardships-services:

To examine the changes or hardships with respect to services provided, interviewees were asked, "What is the major impact that Hurricane Katrina has had on your agency and the services provided?" All five organizations discussed some sort of reduction in services after Katrina. Specifically, a few mentioned the impact that the closing of Charity Hospital had on their clients. Sal, an Admissions Counselor with the Faith-Based Organization, talked about the impact the closing of Charity hospital had on medical detox and psychiatric services, "Like I said the detox is still a big issue with Charity Hospital not being there anymore. Basically when someone needs to medically detox, our best suggestion is to go to the emergency room and plead your case because there isn't any free medical detox… I believe the biggest one that sticks out in my mind is some of the psychiatric services that were here prior to Katrina that are not here anymore. Some of the group homes have relocated and some of the places either are not opened

yet or are not completely back opened." Ronni also noticed this change, "There is a market decrease in the outreach services. The services that our kids can access, medical referrals, the doctors available are limited; the closure of Charity Hospital has markedly decreased what services our available to our core population and thus our homeless population which are the kids that we deal with…Many of the private physicians have had to relocate or have just not come back."

Once again, there seemed to be a noticeable link between the issue of spacing and its impact on services organizations can provide. Many organizations discussed a reduction in services because of smaller space or having to share space with another organization. Don, a Program Manager, mentioned, "The biggest impact was that we lost our building so which means that we are operating out of temporary sites. And it's impacted our clinic because our clinic is temporarily housed at an organization, a Catholic organization so we are not able to give out condoms or do family planning which is what we normally do…" Daniel with the STI Services Organization also discussed how spacing impacted services, "The major impact that it first had was that we weren't able to access our building our main office…So services wise we were sort of limited on what we could actually provide…The primary care was the one that we were unable to start up again but most of the rest of the services that the agency had to offer they did, but they did it more out of home visits for the people that were back here and residing and using this office too…"

Changes and hardships-reaching population:

A major barrier three organizations discussed was the issue of reaching their population after the storm. Many were evacuated from the city due to Katrina and even those who stayed or eventually returned may have been displaced, homeless or temporarily residing elsewhere. This made it difficult for organizations to reach their population in order to offer services. Jo, a Biostatistician with the Government Health Organization, discussed this difficulty, "In terms of the services provided, one of the main things has been the evacuation of the entire population and the migration basically of the HIV population. And I think that really around here a lot of effort has at least in terms of my role has been concentrated trying to track where people have gone, how many people have come back, and even using some of these general population estimates as well as our own internal surveillance data to try to estimate sort of these migration trends and figure out how many people are back, how many people have returned." Similarly Ray, a Program Coordinator, mentioned, "One of the major impacts was having our clients literally scattered throughout the country. So by having that happened we've been working very hard to maintain contact and get new clients back…Making sure that our services are available for the clients and making sure that the clients know that the services are available."

New services emerged:

Interviewees were asked if they noticed any new services that emerged post-Katrina. All noticed new services provided by their organization, other agencies or relief efforts. Ray mentioned a non-profit community organization that provided relief services after Katrina, "They've come in here a couple of times and talked to us about their programs and the Latino

Outreach stuff that they're doing." Daniel also mentioned this new organization, "I know they do mostly medical…I know back in November, December, they were trying to secure grant money somehow to actually have funding for employees and not just have volunteers but I don't know if that's gone through yet. So they definitely, sort of grass root level, if you will, came up and started working." Two interviewees discussed new services in their own organizations. Sal stated, "Well definitely our Katrina-Aid Today Program is a new program. That program was designed for the community, anyone affected by Hurricane Katrina. Like I said it's a referral process, it's to help them to talk to FEMA to assist them with housing, clothing, medical services to get them connected with whatever it is that they need or if they're trying to come back into the city, Katrina Aid Today, you know is new post-Katrina."

Organization collaboration:

In order to continue delivering some sort of services to clients, organizations collaborated with each other. All five organizations stated collaborating with other organizations or agencies in some way post-Katrina, from physically sharing space to increasing referrals, conducting outreach together and generally sharing resources and information. Jo, with the Government Health Agency, noticed organizations' overall willingness to work with each other post-Katrina, "I think in some ways everybody's sort of been a little more likely to collaborate or work with each other…as well as providing information, so if other agencies if they have something or maybe people want to share or pull resources, there's a lot more talk about that." Ronni mentioned, "One organization has opened its doors to Traveler's Aid, Family Services, Welfare Food Stamp Office, The Drop-In Center, Tulane's Walk in Clinic, and the Urban League. One of

the two is going to be a Head Start Program and it will expand our day care program. So there are a lot of positive changes…" Additionally, Kris with the STI Services Organization talked about organizations sharing information, expertise and referrals, "Yeah we've coupled with all of the agencies under United Way and all of the agencies under Unity and we do share information, we share referrals, we share expertise because we are always going to a meeting to voice what we need and how we are doing."

Utilization of services:

In order to try to gauge who was utilizing certain services in New Orleans after Katrina, all interviewees were asked about the demographics of the populations they served, what services they specifically provide for IDUs as well as how IDUs are recruited or become aware of their services.

Changes in demographics of clients:

Interviewees mentioned a variety of changes in the populations served by their organizations. These changes include new clients from outside of New Orleans or even outside of Louisiana who end up in New Orleans (possibly migrated looking for work after the storm), old clients who were evacuated and then returned to New Orleans, and changes in the age or race of clients (some mentioned more African-Americans, while others mentioned an increase in Caucasians, as well as Latinos). An increase in individuals coming to New Orleans looking for work was noticed by Ronni who mentioned, "…We're seeing more and more kids coming in from other areas to New Orleans to work or try and make extra money..." Going along with the increase of new individuals coming to New Orleans looking for work, an increase in young

Caucasian males looking for work was noticed by Kris who said, "The bigger population right now are young male Caucasians, we've seen an influx of those simply because so many people came down here to work…so they wanted to go back home so that what was the bigger of the number of people we had, males between 25-35 was an increase for us." Furthermore, a few organizations noticed an increase in the Latino population post-Katrina and also mentioned trying to increase services to reach this population. Don from the Youth Services Organization mentioned, "Since the storm we've reached out a lot more to Latino populations. We're finding, obviously there's a larger Latino population in New Orleans now, but we're also finding that a lot of them are young, undocumented and they fit into our age group."

Services for IDUs:

All interviewees were asked what specific services their organization offers to intravenous drug users. Depending on the organization, these services varied from specifics services for IDUs such as harm reduction to general services offered to all clients such as HIV prevention and testing. Two organizations specifically mentioned offering educational programs for IDUs such as harm reduction programs. Ray a Program Coordinator from the STI Service Organization stated, "Part of the comprehensive risk counseling services which we call wellness management is working doing harm reduction and risk reduction…We teach them how to be safe, teach them how to clean their works and try to work with them to get clean works, just work on safer behaviors." Similarly, Sal an Admission Counselor from the Faith-Based Service Organization mentioned, "Specifically for IV, the program covers substance abuse in general.

So there are IV drug users here but it's all sorts of abusers…So it's geared more behavior modification…. high risk education and it's basically HIV prevention."

A couple of organizations mentioned needle exchange being illegal in Louisiana but some organizations will provide clean needles to drug users if they ask. Sam mentioned that some organizations offer needle exchange once a week. Daniel, a Wellness Management Coordinator and Specialist also discussed the issue of needle exchange, "Not too many agencies will admit to doing needle exchange because they can be prosecuted for that, but there are some agencies that will give out clean needles if someone asks, they do have stashes on them but I can't reveal those sources." Furthermore, organizations discussed offering basic services to this population and also referrals if a client needed services that the organization did not provide. Don, a Program Manager mentioned, "IDU's, they're able to come and they can utilize all of our services so the basic needs, well we don't have basic needs so food, clothing, first aid stuff, they can utilize our clinic. We have bleach kits and clean injection equipment for them. Referrals, we have mental health stuff, substance abuse counseling if they want it."

Also, there are many different ways intravenous drug users learn about and utilize services by these organizations according to interviewees. These methods include outreach, walk-ins, referrals, or word of mouth. Lee, a Community Health Worker with the Outreach Program, discussed using outreach and walk-ins as a primary method to get clients, "We're all walk-in clinics so I mean we're very accessible to people who need medical care…the only outreach we do right now is the street clinic for the day laborers." A few organizations discussed using multiple methods to find clients. Sal, an Admissions Coordinator discussed the various

methods they use, "Basically we do outreach, we do some within hospitals, shelter, we've gone to FEMA…We're also on the internet, we do some press stuff…we do get a whole lot of self - referrals but we also get a lot of referrals from detox facilities, the judicial system, hospitals…." Furthermore, two organizations specifically stated that HIV testing is a way to find intravenous drug users and get them connected to services. For example, Daniel a Wellness Management Coordinator e stated, "…If they come in and get tested for HIV…if they mention that they've used and they don't want to use anymore than we can take it a step further in talking with them and seeing what they feel they need and then linking them to those services."

IDU DATA:

IDU interviewees (N=34) represented young intravenous drug users who were in New Orleans before and/or after Hurricane Katrina. They were able to discuss utilization and accessibility of services in New Orleans post-Katrina (See Table 2). 76.4 % (N=26) were male with an average age of 23.12. 85.2% (N=29) identified as White or Caucasian, and 73.5% (N=25) identified as straight. 97.1% (N=33) experienced homelessness in the past, 55.9% (N=19) reported current homelessness and 29.3% (N=11) had less than a high school education (See Table 3). Furthermore, eight participants arrived or retuned to New Orleans prior to June 2006, while twenty-five returned or arrived between October 2006 and June 2007 (See Tables 4 and 5).

Utilization and accessibility of services:

In order to evaluate the various services that were available and used by this population, all interviewees were asked questions regarding the accessibility and utilization of services in

New Orleans after Katrina. All participants were asked about what services they needed, if they used those services and to describe their experiences (See Table 2). Some of these included shelter and squatting, drug treatment, mental health treatment, prescription medication, medical services, access to clean syringes, youth services and contraceptives.

Squatting:

All interviewees were asked questions regarding their current living situation in New Orleans. Thirty-three participants (97.1%) reported a history of past homelessness and nineteen (55.9%) reported current homelessness. Specifically, participants were asked if they needed a homeless shelter in New Orleans following Katrina. Thirty-two participants (94.1%) reported they did not need or sought a homeless shelter in New Orleans following Hurricane Katrina. On the other hand, this may be because the majority of participants found other means of shelter in New Orleans. Twenty-seven (79.4%) participants reported staying or "squatting" in an abandoned house or building in New Orleans following Hurricane Katrina. These participants described their experiences in these "squats." Some issues included the physical safety of the building, such as instability and many said the buildings were dilapidated or unsanitary. When asked about her experience, Samantha, who arrived in New Orleans in October of 2006, fourteen months after Katrina and less than a month before her interview said, "I haven't seen any mold just like the plumbing's real bad just the ceilings have come down; a lot of the light fixtures have fallen down." However, she then stated that, "I'd rather sleep inside then outside," showing that she was willing to deal with the conditions in order to sleep inside. Furthermore, black mold was commonly mentioned as an issue with these squats. Ronald, who evacuated before Katrina and

has been in and out of New Orleans three times before getting interviewed in April of 2007, described where he squatted, “Black mold exposure, asbestos exposure. Exposure to what other people may have left behind. Dirty needles and that sort of thing…It was alright. I have a sleeping bag that completely folds up around me and zips up. I have a mummy bag. Like army-issued army bag. It’s a full body, it covers your head.”

Others discussed health issues with sleeping in some of these squats. For example, Bob, who returned to New Orleans for the second time in April 2007, mentioned he and his friends got sick from the black mold in his squat and stated, “We were hawking up weird shit.” Calvin simply described the conditions in his squat as, “People shit everywhere.” Furthermore, other participants discussed safety issues such as people coming in while they are sleeping or being harassed by cops. Samantha mentioned, “None of the doors lock and the windows are busted, anybody can come in, in the middle of the night when we’re sleeping, yeah there’s definitely safety issues.” Similarly, Alex, who first arrived to New Orleans in December of 2005, four months after Katrina, and was interviewed in November of 2006 stated, “It’s extremely risky for cops, like you don’t want to get found, and the crack heads with guns too will probably end up shooting you sometime too.” Additionally, Kristen said, “There’s always safety issues. It’s not your house. The police can come arrest you. Other homeless people can come rob you. And the house can be dangerous to be in.” Furthermore, Aaron described where he stayed as “stabbin cabin” because “it’s in a crappy neighborhood and people get stabbed there all the time!”

On the other hand, there were some who stated the experience was not all bad. Allen, who arrived in New Orleans in February 2006, six months after Katrina, described his situation

and said, “The one house that me and my two friends that I still live with, we took over, it was in pretty good shape. They said it had toxic floodwater but it didn’t stink, it wasn’t nasty. I think they had cleaned it already. It was just a busted up, dilapidated New Orleans old –It was safe. There were big spiders in it.” When asked what his overall experience was he mentioned, “I loved it. The 9th Ward, there’s like a 20,000 room hotel! And we stayed in an elementary school too, which was really excellent cause only the first floor got flooded and we went all the way up to the third floor and it was pristine. And we even found a room where the door locked so it was totally cool.”

Drug Treatment:

All participants were asked questions regarding services they needed or utilized, such as drug treatment. Twenty-two (64.7) participants reported past drug treatment experiences. A total of six (17.6%) participants stated they needed drug treatment including methadone or drug detox in New Orleans following Katrina. Five of those six participants stated they were able to find treatment. During the interviews, participants did not specifically describe why they felt they needed treatment, some just mentioned they needed drug treatment but did not necessarily find it. For example, when Joey, who first arrived in New Orleans in January 2006, five months after Katrina, was asked if he needed drug treatment he responded, “I think yes. But I never did anything about it.” Similarly, Albert, who left New Orleans before Katrina then returned and was interviewed in March 2007 stated, “Oh I need it. I need to be in a methadone clinic for free” but he also mentioned he was unable to find treatment. The five participants who reported finding drug treatment did not describe their experiences.

Mental Health:

A total of twenty-seven participants reported receiving mental health care in the past. When asked if they needed to see a doctor or therapist for mental health difficulties in New Orleans following Katrina, seven interviewees (20.6%) stated they needed to see a doctor or therapist, but only four of that seven (57.1%) reported finding mental health services. Also, six participants (17.6%) reported needing prescription medications for a mental health condition in New Orleans following Katrina while only two (33.3%) reported finding prescription medications for mental health. When asked what her experience was when trying to find mental health treatment, Elizabeth, who arrived in New Orleans in February 2006, six months after Katrina, described it as horrible and said, "Oh I tried to go to the mental health clinic but they refused me service…and I really was honestly just trying to get like medication that I've been using for a long time…" Joey discussed his situation where he was trying to get "clean" and could've used mental health help but never sought it, "I was hooked up on dope and shit, you know." Similarly, Allen reported needing to see a doctor of therapist, briefly speaking to a psychiatrist and not following up with an appointment he made with a social worker. He stated, "I did not see-well, I didn't – okay, I saw a doctor. I saw a psychiatrist. I didn't talk to her about what I wanted to talk about and I had an appointment with a social worker and I wouldn't go."

Prescription medication:

Specifically, regarding prescription medication, a couple of participants stated they had some difficulties finding medication. Michael, who evacuated a few days after Katrina and returned to New Orleans four months later in December 2005, mentioned, "In New Orleans?

There's a point in time right after I got back that not all the stores were open, it was difficult to find pharmacies that were still carrying huge selections of medications. There was one point when I got my first medications and then I was running into problems with transferring some Medicaid between Florida and Louisiana and I came back here and then Medicaid from Florida wouldn't pay for anything so then I had to get them from my doctor." Also, when Joey was asked if he has had any difficulties finding needed medication in New Orleans he stated, "I don't even know where to see a doctor at. The only doctors I've inquired about they all cost money."

Medical Services:

When asked about medical services, sixteen (47.1%) participants reported needing medical services, such as a health clinic, STD screening or emergency room in New Orleans following Katrina. Thirteen of those interviewees (81.2%) reported finding the services they needed. Of the participants who needed medical services, some described their positive and negative experiences if they utilized services. On the other hand, many mentioned not seeking out services, not having access, or medical services were too expensive. Joey, who arrived in New Orleans five months after Katrina, described a situation where a friend of his overdosed and had to go to the emergency room. "I was with this girl who overdosed and I needed to take her to the emergency room…They did a good job." On the other hand, quite a few interviewees discussed negative experiences when trying to utilize medical services. Eighteen year old Elizabeth, who arrived in New Orleans six months after Katrina, described her negative experiences with health services in New Orleans after Katrina. She mentioned, "The free clinic probably didn't save my life, it's a dirty, nasty, hole in the wall piece of shit, but they're really

nice. It used to be a lot dirtier actually… Every time I've gotten health care in this city, like they just sometimes have like the weirdest, most fucked up, advice." Additionally, Samuel, a 27 year old male who returned to New Orleans for the second time in June 2006 described his situation, "I had cellulitis on my arm and I went to the hospital because there was nowhere else to go in New Orleans…I think they were understaffed for sure. It took a long time to get in. My medications were always late. The nurses always ran thin. I think there was a lack of employees."

Furthermore, participants were asked what they thought about service availability in general, and many had negative comments regarding medical services. Michael, who returned to New Orleans 3 months after Katrina, described a negative experience where he could have died because of treatment, "I ended up having to go to a hospital that tried to kill me once. They fed me a couple penicillin after I told them I was allergic to it. But it was the only functional hospital in the city." Sally, a 22 year old female who evacuated right before the storm and returned to New Orleans 3 months after the storm, also had many negative comments regarding medical services in New Orleans following Katrina. She said, "We got one guy over at the house right now that broke his toe and like cut it off with this big T.V. they dropped on it. He went to 3 different hospitals sat in each one for like 6 hours, 6-12 hours and he can not get anyone to see him…There are no hospitalization services around here that are worth a damn…I'd rather throw up and die than go sit in the fucking emergency room for fucking 14 hours bleeding to death." David, an 18 year old male who evacuated right before the storm and returned a year later, mentioned the closing of Charity Hospital as a major issue, "I personally haven't used as much services, but I do know that as far as people that need to go to a hospital

who don't have any money or insurance, really don't have anywhere to go. Cause Charity is not – services, as far as medical and health haven't been up to par really at all." In addition, when asked about service availability, Samuel simply said, "Service sucks here. Medical and everything." Overall, the majority of participants who sought out medical services were able to find services. However, it seems as if their perceptions of the quality of those medical services were negative and many were not satisfied with the services they received.

Of importance to note, Michael's narrative described his experience at Charity Hospital through the storm. His report is a prime example of the harsh conditions during and immediately after the storm, specifically when it comes to the hardships medical services suffered:

> "211 patients, two full sets of staff, no power, no water, no food. After two days of no water to flush the toilets, things started getting a little bit more clear to me. I was on a lot of pain medication and I didn't have the ability to watch TV so I couldn't tell just exactly how bad it was. All I saw was 3 ft. of water outside. Apparently, there was a lot more in other places! On the fourth day, they had snipers that were shooting at people trying to evacuate Charity Hospital. They had shut it down one time because they were trying to take over the pharmacy. We'd run out of all the food, all the water. Even the nurses were having to give themselves IV's towards the end because everybody had to stay hydrated. It was kind of interesting."

<u>Hepatitis A, Hepatitis B, HIV Screening:</u>

When asked specifically about screening services, nine participants (26.5%) reported they needed testing for Hepatitis B, Hepatitis C, or HIV in New Orleans following Katrina. Only four

of those (44.4%) reported finding screening. Bill, a 21 year old male who arrived in New Orleans in February 2007, described needing testing because, "I've had multiple sexual partners since my last test and even though I used protection, I still think it's a responsible thing to do." Alex, a 23 year old male who first arrived in New Orleans in December 2005, described a similar situation, "I've just been promiscuous and irresponsible about testing that's all… I need it for no particular, I have no symptoms of anything but if I like to be tested you know." Michael mentioned utilizing services at the HIV Outpatient Program in order to get testing, "…June of 2006. I had blood work done. Not for HIV but all the hepatitis…It was just general bloodwork…The HIV Outpatient Program. It's part of LSU I think." Samantha, who arrived in New Orleans in October 2006, discussed needing testing because she was sexually assaulted and was able to get tested in the hospital, "I was sexually assaulted so I needed to take an HIV test and I have to go back in another 6 months to get another HIV test…I went to the hospital…The nurse was fine, I mean she suggested it."

On the other hand, there were some interviewees who reported needing testing services but were not able to utilize these services. For example, Rob, a 28 year old male who has travelled in and out of New Orleans 3 times since October 2006 reported needing services but did not get them because, "…I am not sure that they are here…" Also, Allen, a 28 year old male who arrived in New Orleans in February 2006, mentioned needing services but hasn't actively looked, "I haven't looked yet. But there is a place; I'm pretty sure that…I haven't tried but I'm petty sure I can find it in one day."

Access to clean syringes:

A total of seven interviewees (20.6%) reported difficulties finding clean syringes in New Orleans following Katrina. Joey, a 28 year old male who arrived in New Orleans in January 2007, mentioned it was hard trying to find clean syringes, "I really hadn't used a needle too much since I've been here but a few times, but I never had to have it at all. I just remember you just can't get 'em here." Sally, who returned to New Orleans over a year after Katrina, mentioned, "I have a bit a trouble finding syringes." When asked where she got syringes she said, "Somebody brought them to me." Also, although some participants mentioned going to pharmacies to get syringes, Rob described the opposite experience. He has been in and out of New Orleans three times after Katrina before being interviewed in February 2007 and mentioned he could not get them from Walgreens and used dirty syringes that he, as well as others, used previously. "They won't sell it to you at Walgreen's…I've been using dirty rigs. I mean I know I can go Tuesdays and Thursdays at the needle exchange, but every time Tuesday or Thursday rolls around, I'm doing something else. I'm not planning on staying here and doing a bunch of drugs so I don't really need a bunch of rigs. I have one rig that I've used over and over and over again. That was clean when I got it." Similarly, Aaron, a 25 year old male who arrived in New Orleans in November 2006, reported having difficulties finding syringes and sharing needles, "Yes. It's [the needle exchange] only two days a week. That's how I ended up sharing needles."

On the other hand, those who reported not having difficulties mentioned getting clean syringes from pharmacies (such as Walgreens), friends, and the needle exchange. When asked if he had any difficulty finding clean syringes in New Orleans following Katrina, Bill, who arrived

in New Orleans in February 2007, mentioned he gets them "from friends and the exchange…" John, who arrived in New Orleans in March 2007, mentioned it is easy to find syringes; however the ones he found may not necessarily be clean, "I found a bunch of syringes the other day on the railroad tracks. I was like 'sweet'…It's easy. It's always easy to find clean syringes. There would be no difficulty finding 'em…Cause finding 'em on the street isn't like going to a Walgreen's or going to a needle exchange or that kind of thing!" Additionally, Allen described cleaning his syringes and re-using them, but then getting clean ones when the new exchange program re-opened, "I had this one that I used before and I bleached it out. I was using that one for a LONG time until it totally fell apart. And then I left the city and then I came back and found out about the new exchange had started again, because it had been closed down for a while."

Youth Services:

Eight interviewees (23.5%) reported needing youth oriented services, such as a drop in center, in New Orleans following Katrina and seven of those (87.5%) reported finding and accessing these services. For example, 25 year old Samantha who arrived in October 2006 described a positive experience, "I got everything stolen because I lost my truck, they just gave me a blanket, things like that, a brush, canned food, just supplies that I needed…like clean socks…" Similarly, 21 year old Bill, who arrived to February 2007, well over a year after Katrina, mentioned he had a good experience at the drop-in, "Well, I needed socks and they gave me socks and also alcohol swabs and antibiotic ointment for my leg wound."

On the other hand, some interviewees described not being able to utilize the drop-in center, the decrease in services, or gave an overall negative perception of the services available. For example when Bill was asked about what he thought of service availability, he mentioned, "It seems like…I mean it's kind of hit and miss. The youth drop-in center, you know, that's one of the things I can contrast cause I did go there when I was 17, came here the first time and like since then, you can't do laundry there anymore and you can't take showers." John, a 21 year old male who arrived in New Orleans in March 2007 also mentioned, "I haven't seen anything. I don't know. I know there is a drop-in center somewhere but I heard that they were hit so hard with all the people from Katrina that they don't have much." Twenty-four year old Rick, who arrived in New Orleans in January 2007, couldn't access the drop-in center because of his age, "I was just trying to get some food and they wouldn't let me in cause they said I was too old." Furthermore, 29 year old Albert felt as if the drop-in center should have more accessible hours, "Horrible. I was just thinking that this morning. Why don't they be open at 8:00? Just go take a shower, chillin at lunch."

Condoms/contraceptives:

Only one participant (2.9%) reported having difficulty finding condoms, other contraceptives, or family planning services in New Orleans following Katrina. Most of the participants mentioned it was relatively easy to find condoms, either at the drop-in center, stores, pharmacies, bars or from friends. For example, when asked if he has had any difficulty finding condoms in New Orleans following Katrina Ronald, a 26 year old male who evacuated before Katrina and travelled in and out of New Orleans three times before getting interviewed in April

2007, said, “No way. There’s bars everywhere with big bowls of condoms for free even at the coffee shops.”

DISCUSSION:

An analysis of the findings indicate that there was major service disruption in New Orleans as a result of Hurricane Katrina for all residents, but more so for vulnerable populations such as intravenous drug users. This has also been shown in the literature which examined the impact of Hurricane Katrina on New Orleans’ resources, communities, residents, and services (Rudowitz et al., 2006, Kaiser Family Foundation, 2007, and Rowe & Liddle, 2008).

Young intravenous drug users are specifically susceptible to adverse health outcomes. Utilization and access of services is not very common among this population due to a lack of awareness, lack of these services in certain neighborhoods, or inconvenience locations and hours. CAP and IDU interviewees mentioned difficulties providing and acquiring services. Specifically, CAP interviews discussed difficulties and hardships with regard to providing services to the population. CAP participants were interviewed between February and March 2006. They were able to adequately provide information regarding changes and hardships with services seeing as how they were in New Orleans before and after Katrina, providing services to clients. They were also able to discuss the differences of services before and after Katrina.

On the other hand, IDU participants consisted of transient youth who either traveled in and out of New Orleans, or came to New Orleans after Katrina for the first time, some over a year after Katrina; therefore some could not discuss differences with regard to services before and after Katrina. Still, seeing as how New Orleans is still suffering the effects of Hurricane

Katrina today, all participants were able to contribute relevant data regarding the impact of the storm on services in New Orleans.

CAP data focused on the challenges organizations had while trying to deliver services, not only to intravenous drug uses, but to all clients. Most mentioned issues such as a reduction in services, personnel, funding streams, and difficulties reaching population and clients, as well as spacing and hardships having to do with location. Conversely, few mentioned the emergence of new services, expansion of some current services and funding streams and organization collaboration as a direct result of Hurricane Katrina.

Particularly, one of the biggest issues organizations dealt with was location and spacing. Hurricane Katrina damaged a great deal of property including houses, buildings, businesses and organizations. The majority of CAP narratives described damages to the organization's property which resulted in a great reduction of services. Organizations began to collaborate, share office space, while others worked out of homes or vans. Collaboration with other organizations allowed some services to continue, but also halted others; such as contraceptive services and family planning if an agency resided in a Catholic organization's location.

These organizations provided services to various populations not only intravenous drug users. However, since IDUs require some specific needs, such as drug treatment, detox, risk reduction education etc., these types of services were scarce. IDU narratives described many positive and negative experiences attempting to utilize these services as well as medical treatment, mental health treatment, prescription medication, youth services, screening and clean syringes. Generally, the majority (N=25) of IDU interviewees arrived in New Orleans over a

year following Katrina, most after October 2006 (See Table 4). These participants described less negative experiences while trying to access needed services when compared to those who arrived, or returned, to New Orleans before June 2006. For example, those who arrived or returned to New Orleans before March 2006 mentioned either not accessing services or negative experiences while trying to access or receiving services.

Interestingly, the date of arrival or return did not have a significant impact on the experiences with squatting or the amount of participants who squatted in New Orleans. Twenty-seven (79.4%) reported squatting in abandoned homes or buildings in New Orleans and described the conditions, dangers and harmful situations that may have resulted. Only two participants reported needing and accessing homeless shelter services; the others who needed shelter squatted. Some of the conditions mentioned included black mold, safety issues and other hazards. It seems as if even a year after Hurricane Katrina, there were many buildings and homes that were damaged and abandoned where homeless youth found shelter.

Additionally, with respect to accessing medical services, drug treatment, youth oriented services, or condoms and family planning, the majority of interviewees discussed utilizing these services or not having much difficulty finding these services. Seventeen (50%) participants reported needing medical services, while thirteen of those (81.2%) reported finding the services. Six (17.6%) participants stated they needed drug treatment, while five of those reported finding services. Eight interviewees (23.5%) reported needing youth oriented services, and seven of those (87.5%) reported finding services. Also, only one participant (2.9%) reported having difficulty finding condoms, other contraceptives, or family planning services. Overall, it seems

as if a fair amount of participants who actively sought out certain services were able to find these services. However, among those who obtained the services, satisfaction was not universal. It seems as if there were many different perceptions of the quality of these services and many were unsatisfied with the services they received.

On the other hand, many participants reported needing certain services, such as mental health, screening or finding clean syringes, but were unable or had difficulty finding or accessing these services for a variety of reasons. Seven interviewees (20.6%) stated they needed to see a doctor or therapist, but only four of that seven (57.1%) reported finding mental health services. Six participants (17.6%) reported needing prescription medications for a mental health condition, while only two (33.3%) reported finding prescription medications for mental health. Nine participants (26.5%) reported they needed testing for Hepatitis B, Hepatitis C, or HIV, but only four of those (44.4%) reported finding screening. Also, a total of seven interviewees (20.6%) reported difficulties finding clean syringes in New Orleans following Katrina. However, those who reported not having difficulties mentioned getting clean syringes from pharmacies (such as Walgreens), friends, the drop-in center or finding syringes on the street. Of importance to note, participants' perceptions of what is deemed "risky" may be at odds with what public health practitioners define as risky. For example, IDUs may view receiving syringes from friends, finding some on the street, or repeatedly cleaning and reusing needles (as some mentioned) as safe, while those in the public health field will categorize this as "unsafe" or "unclean syringes." Furthermore, these findings show that few participants reported seeking out the services previously mentioned, and of those, not all were able to access those services. Again, it seems as

if there are varying perceptions of the quality of these services. Narratives show that many who reported finding needed services also expressed dissatisfaction with those services.

The findings from the CAP and IDU data shows the significant impact Hurricane Katrina had on the accessibility and utilization of services in New Orleans among intravenous drug users. These findings suggest that more research is needed in the evaluation of the impact on natural disasters among high risk populations. More importantly, studies on young intravenous drug users and their needs, specifically in New Orleans, are scarce. These findings point to the need for further research among young intravenous drug users and the affects services may have on adverse outcomes and risky behaviors. More research in this population can help determine the service needs that this population requires.

Findings also highlight the importance of applying the risk environment framework to young IDUs. This framework examines the circumstances that predict, produce and cause harm in order to reduce harm (Rhodes, 2002). Needless to say, the "harm" environments surrounding IDUs contributes to risky behaviors and adverse health outcomes. Following a disaster such as Hurricane Katrina, young IDUs, according to these findings, experienced a reduction in needed services. This could have contributed to an already harmful environment and put them at greater risk for negative outcomes because needed services were not accessible. Among available services, some were not of the highest quality. Applying this framework can aid in designing relevant interventions and programs targeted to this population. These findings show the importance of having adequate services available to this population, especially following a devastating natural disaster such as Hurricane Katrina.

Recommendations for preparing for this type of situation include stockpiling of needed supplies, specific contingency plans, proactive planning, and detailed emergency preparedness. This will not only aid in providing services and supplies to the entire population, but vulnerable populations such as young IDUs as well. Furthermore, narratives in this analysis highlighted the fact that even though services were available after the storm, many were not aware of them and others who did access services were not satisfied with the quality. This highlights two concerns. One, it increasingly important to provide quality services and two, sufficient outreach services are needed, specifically after a disaster and particularly with hard to reach populations. In addition, a couple narratives from the organizations interviewed mentioned offering harm and risk reduction services to IDUs. It is imperative that these types of services are expanded to this population, especially following a disaster.

LIMITATIONS:

CAP interviews were conducted about six months after the storm in February and March 2006. IDUs were interviewed starting ten months after the storm in June 2006 to April 2007 (only one interviewer on staff). There is a possibility that information from both sets of interviews may not match up due to this time lapse; many changes could have occurred in New Orleans during those few months. The gap between the CAP interviews and IDU interviews can possibly create different perspectives on the conditions or changes in the city due to Katrina. However, an aspect of CAP interviews was to determine what locations would be best to recruit young intravenous drug users, therefore interviewing CAP participants prior to IDU interviews were necessary. Also, many of the IDUs interviewed arrived for the first time in New Orleans

up to one and a half years after Hurricane Katrina; therefore some were not able to provide perspectives on services before and after Katrina.

Furthermore, among the ten CAP interviewees, four were employed with the Faith-Based Service Organization and three with the STI Service Organization. This sample may not be representative of all organizations providing services to the population after Katrina. However, these participants were still experts in their fields and were able to give knowledgeable and detailed information regarding services available and provided to the target population.

Lastly, recent ketamine use as a criterion may have been a potential methodological weakness. However, ketamine use is an aspect of the New Orleans dug market and therefore a useful criterion. Also, this criterion kept the sample consistent with the parent R01.

CONCLUSION:

Overall, the purpose of this project was to assess the availability and utilization of services among young intravenous drug users in New Orleans after Katrina. Few studies have evaluated the effects of Hurricane Katrina among the young IDU population and how their risks were impacted by this event. Following a disaster such as Katrina, when services were needed more, especially among high risk populations, these services were scarce or nonexistent. This evaluation of a high risk youth population in New Orleans following Katrina provides information on particular service needs among this population in the aftermath of Katrina, considering that this population has not been extensively studied.

These findings indicate that the storm greatly affected organizations serving New Orleans residents, particularly high risk populations such as young intravenous drug users. This data also illustrates that immediately after the storm, IDUs had some difficulty utilizing needed services or were not aware of some services that were available. On the other hand, some organizations mentioned an increase in services or funding, while some IDUs reported accessing and utilizing needed services.

Studying a population of young high risk sexually active drug users can provide important information on risk behaviors in New Orleans after Katrina among young people. The significance of this study lies in the fact that little was known, regarding young intravenous drug users' access and utilization of services following Katrina. Also, how access to services or lack thereof, can influence their risk behaviors or adverse health outcomes, had not been examined. It is apparent that additional research is needed to examine this population's behaviors and risks, and evaluate adverse outcomes and relevant programs and interventions. This data provided significant information needed in order provide relevant services and to design effective intervention programs for this population. Findings from this project can be used for larger studies and to inform intervention programs examining high risk youth and increasing access to services.

LIST OF TABLES

TABLE 1-CAP Interviewees:

	ID	Participant Pseudonym	Organization Pseudonym	Position title
1	CAP1	Jo	Government Health Agency	Biostatistician
2	CAP2	Sam	Faith-Based Service Organization	Not reported
3	CAP3	Lee	Outreach Program	Community Health Worker
4	CAP4	Ray	STI Service Organization	Program Coordinator
5	CAP5	Ronni	Faith-Based Service Organization	Health Services Manager/ Nurse
6	CAP6	May	Faith-Based Service Organization	Crisis Center Program Manager
7	CAP7	Daniel	STI Service Organization	Wellness Management Coordinator and Specialist
8	CAP8	Don	Youth Services Organization	Program Manager
9	CAP9	Kris	STI Service Organization	Wellness Management Coordinator and Specialist
10	CAP10	Sal	Faith-Based Service Organization	Admissions Counselor

TABLE 2-Service Utilization:

While in New Orleans after Katrina…	Frequency (N=34)	Percent (%)
Needed/sought homeless shelter	2	5.9
Found shelter (who needed)	2/2	100.0
Squatted	27	79.4
Needed/sought drug treatment	6	17.6
Found drug treatment	5/6	83.3
Needed/sought mental health help	7	20.6
Found mental health help	4/7	57.1
Needed/sought prescription meds for mental health	6	17.6
Found prescription meds for mental health	2/6	33.3
Needed/sought youth services/drop-in center	8	23.5
Found youth services/drop-in center	7/8	87.5
Needed/sought medical services	16	47.1
Found medical services	13/16	81.2
Needed/sought Hep B, Hep C or HIV testing	9	26.5
Found Hep B, Hep C or HIV testing	4/9	44.4
Difficulty finding clean syringes	7	20.6
Difficulty finding contraceptives	1	2.9

TABLE 3-IDU Demographics:

Average age=23.12	Frequency (N=34)	Percent (%)
Male	26	76.4
Self-identified White/Caucasian	29	85.2
Self-identified straight	25	73.5
Past homelessness	33	97.1
Currently homeless	19	55.9
Less than high school education	11	29.3
Have children	9	26.5
Ever arrested	32	94.1
Ever drug treatment	22	64.7
Ever mental healthcare	27	79.4
HCV+	8	23.5
HIV+	1	2.9

TABLE 4:

Returned to New Orleans	**N=33 (Missing 1)**
October 05- December 05	2
January 06-March 06	4
April 06-June 06	1
July 06-September 06	0
October 06-December 06	10
January 07-March 07	11
April 07-June 07	4
In New Orleans through Katrina	**1**

TABLE 5:

	Age	**Sex**	**Pseudonym**	**Katrina**	**Evacuated?**	**Arrived or Returned?**	**Interview Date**
1	27	M	Michael	8/29/05	9/3/05	12/15/05	11/17/06
2	18	M	Richard	8/29/05	Was not here	10/06	12/7/06
3	25	F	Samantha	8/29/05	Was not here	10/1/06	10/26/06
4	21	M	Bill	8/29/05	Was not here	2/07	4/27/07
5	24	M	Rick	8/29/05	Was not here	1/07	2/8/07
6	18	F	Elizabeth	8/29/05	Was not here	2/06	9/7/06
7	21	M	John	8/29/05	Was not here	3/25/07	4/4/07
8	28	M	Steven	8/29/05	Evac right before storm	12/06	2/2/07
9	26	M	Ronald	8/29/05	Evac right before storm	3rd return 4/10/07	4/14/07
10	19	F	Natasha	8/29/05	Was not here	10/17/06	11/3/06
11	18	M	David	8/29/05	Left a week before storm	10/06	11/18/06
12	21	F	Karen	8/29/05	Was not here	4/3/07	4/7/07
13	25	M	Joey	8/29/05	Was not here	1/06	1/5/07

14	24	M	Peter	8/29/05	Was not here	1/07	2/9/07
15	22	F	Sally	8/29/05	Evac a week before storm	12/12/06	7/7/06
16	18	M	Jacob	8/29/05	Was not here	2/07	2/26/07
17	28	M	Bob	8/29/05	Was not here	2nd return 4/8/07	4/12/07
18	22	M	Rob	8/29/05	Was not here	3rd time back 2/07 (In and out since 10/06)	2/28/07
19	19	M	Anthony	8/29/05	Stayed through storm	Stayed through storm	8/21/06
20	25	M	Tony	8/29/05	Was not here	Mid 1/07	2/6/07
21	27	M	Samuel	8/29/05	Was not here	2nd return 6/06	1/26/07
22	25	M	Aaron	8/29/05	Was not here	Beginning 11/06	11/28/06
23	24	M	Dan	8/29/05	Was not here	Mid 11/06	12/19/06
24	23	M	Carl	8/29/05	Was not here	2/06	7/27/06
25	21	M	Calvin	8/29/05	Was not here	4/12/07	4/17/07
26	25	M	Benjamin	8/29/05	Was not here	2nd return 10/6/06	10/13/06
27	21	M	Barry	8/29/05	Was not here	1/07	4/18/07
28	23	M	Andrew	8/29/05	Was not here	1/5/07	1/12/07
29	28	M	Allen	8/29/05	Was not here	2/06	11/6/06
30	22	F	Andrea	8/29/05	Left a week before	10/29/06	11/1/06
31	25	F	Kristen	8/29/05	Was not here	2nd return 1/07	2/7/07
32	23	M	Alex	8/29/05	Was not here	1st arrive 12/05, 2nd return 10/06	11/7/06
33	21	F	Angela	8/29/05	Was not here	Beginning 2/07	2/27/07
34	29	M	Albert	8/29/05	Left prior	Not reported	3/29/07

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